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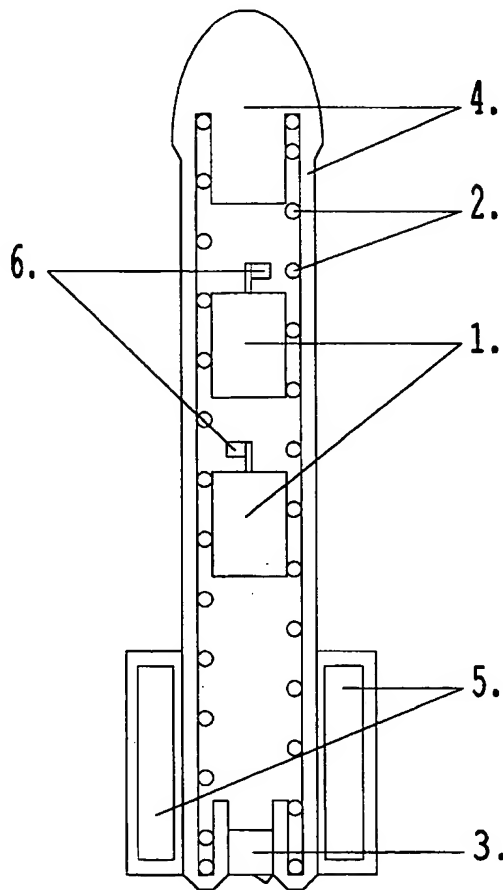
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DE 003517774 A **US 6217533 A**

(58) Field of Search:
UK CL (Edition V) A5R
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Other: EPODOC, PAJ, WPI

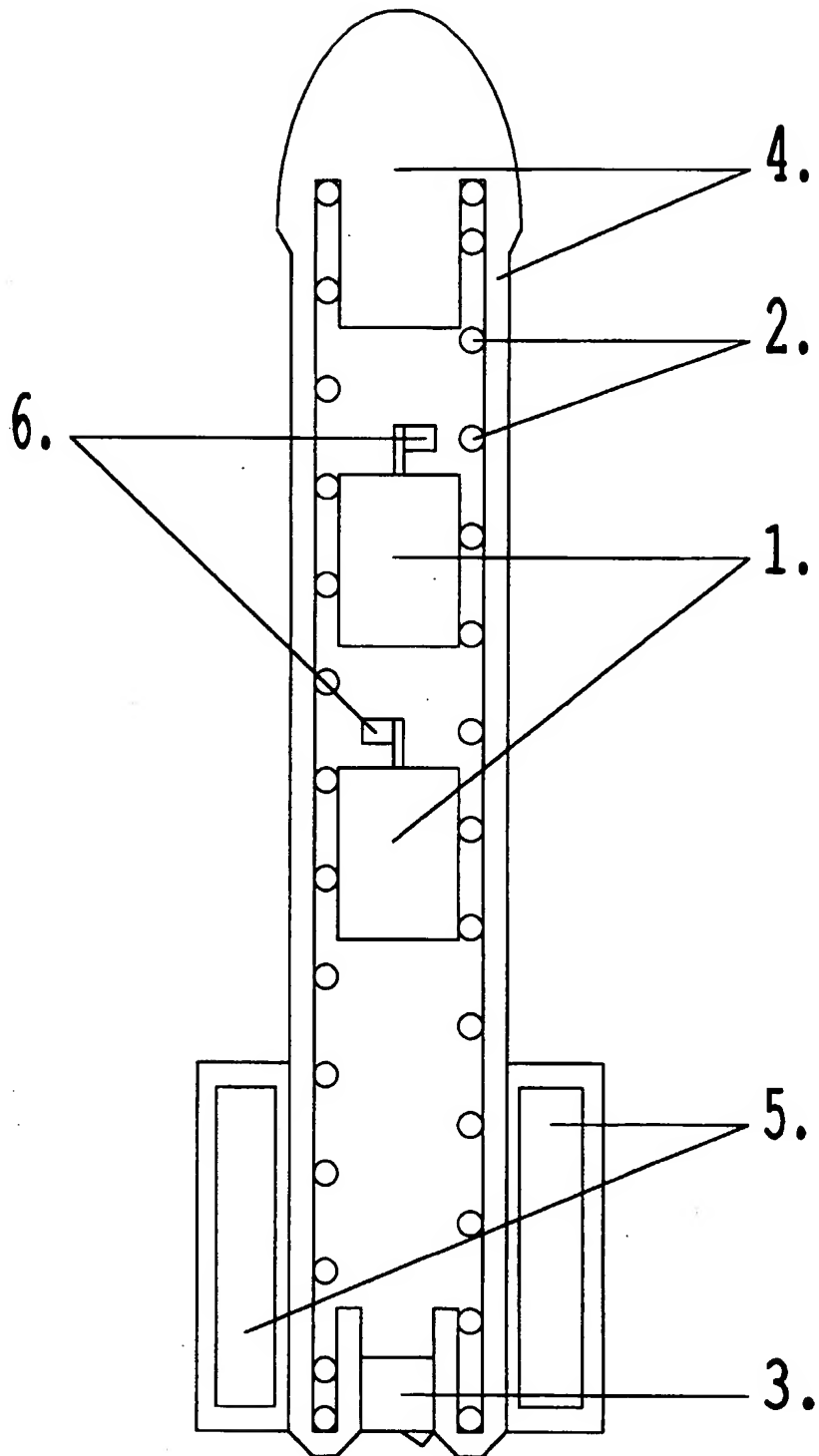
(54) Abstract Title: **Vibrating device used for erotic stimulation**

(57) A vibrating device containing two electric motors (1), each with an offset weight attached to their output shafts (6). The motors spin at slightly different speeds to produce an overall vibration that continually varies, manifesting itself as a "throbbing" vibration. The flexible body of the device 2 allows the user to vary applied pressure during use and the removable silicone rubber outer surface of the vibrator (4) can be removed to allow for changing the texture and size of the device and for cleaning purposes.



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Description

A Vibrating Device Used For Erotic Stimulation Of The Body

Background: Vibrators are made in many shapes and textures and can combine vibration with other types of movement to achieve the desired effect. Sometimes the vibration can be set at a level by altering the voltage to an electric motor that spins an offset weight to cause varying intensities and speeds of vibration. Once set, the vibration remains the same until it is altered again. This particular invention is a vibrator that continually alters the intensity of the vibration without altering the speed of vibration, through a short range of wave amplitudes and through a short repeated cycle without using any complicated circuitry. In short, it is a vibrator that throbs.

Essential Features: The first essential feature of the device is the two interacting electric motors (1). Both of these motors have an offset weight attached to their output shafts (6). These two weights are very slightly different from each other either in their weight or the positions of their centres of gravity in relation to the output shafts, or both. This causes the motors to spin at slightly different speeds, which in turn causes them to drift in and out of synchronisation with each other. At any moment the respective vibrations of each motor may add together to create a higher vibration amplitude, or they may cancel each other out to some extent to reduce the vibration amplitude in the main body of the device. Since the motors are continually drifting in and out of phase with each other the overall vibration in the body of the device will drift to and from these two amplitudes of vibration in a throbbing manner.

The second essential feature is the structure of the of the body of the device (2). This is a metal coil spring which allows transmission of the vibration from each of the motors while at the same time allowing the motors enough independence from each other so that they can maintain their separate frequencies. If the body is rigid, then the motors tend to be affected by each other enough to make them spin at the same speed. The flexibility of the spring also allows the user opportunities to apply pressure to desired areas of the body.

A less essential feature is the fact that the silicone rubber sheath (4) that covers the spring allows removal and replacement for hygiene and for variety of texture and size.

Batteries (5) should be rechargeable NiMH, either by removal and placement in a battery charger (this allows for use in the bath tub), or by plugging a battery charger into the device (this allows for more convenient charging but makes sealing the device against water very hard to achieve).

The Drawing: The drawing shows a longitudinal cross-section of the device showing the positional relationships between the two electric motors (1), the coil spring (2), the on/off switch (3), the silicone rubber sheath (4), and the 12 AAA batteries mounted around one end of the device (5). Any connecting wires between the batteries, the switch and the two electric motors have been excluded from the drawing so as not to detract from the important features.

Claims

This invention is a vibrating device that uses two electric motors, with offset weights on their output shafts so that they vibrate when they are operating, in close enough proximity to each other, that the interaction of the vibrations caused by each of their respective operations, induces an overall vibration in the body of the device that alters continuously while the device is turned on.

Amendments to the claims have been filed as follows

This invention is a vibrating device that uses two electric motors, with offset weights on their output shafts so that they vibrate when they are operating, in close enough proximity to each other, that the interaction of the vibrations caused by each of their respective operations, induces an overall vibration in the body of the device that alters continuously while the device is turned on, wherein the body is a metal spring.



Application No: GB 0220623.3
Claims searched: all

Examiner: Jason Bellia
Date of search: 2 June 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	all	DE 3517774 A (JAEGER & NEMETH) See figures and WPI abstract Accession No. 1986 -312613 [48]
X	all	US 6217533 B1 (McCAMBRIDGE) See column 2 line 10-23 & 42-67

Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKCV:

A5R

Worldwide search of patent documents classified in the following areas of the IPC⁷:

A61H

The following online and other databases have been used in the preparation of this search report :

EPODOC, PAJ, WPI